Hobbies WEEKLY

Sumpkins

CONTENTS

September 13th, 1950 Price Fourpence Vol. 110 No. 2863

A HANDY SHOPPING OR

GARDEN CARRIER

THIS is a simple version of the popular shopping carrier, which can easily be made at home, and be quite as efficient as the commercial article. Apart from its use for shopping purposes, it can be utilised in other ways as a carrier, carting dead leaves in the garden, for instance, or conveying small quantities of vegetables from allotment to home.

Large Wheels

A pair of 6in. rubber-tyred wheels will be required, obtainable almost anywhere now, and for these a wood axle bar of 1½in. square hardwood will be required, shown in Fig. 1. A fairly tough wood is necessary here for the axle screws, on which the wheels turn, to grip strongly enough. Bore holes for these screws in the exact centres of the ends of the bar.

At the back of the bar chisel out two grooves, ½in. wide and ⅜in. deep, for the handle-bars to enter. Space these grooves just 5ins. apart. In the front of the bar a central wooden leg is fitted to keep the carrier on an even keel as it were, when at rest.

The Rest

Cut this from any thick wood to the shape shown and at the rear end of it cut a ½in. thick tenon, ⅜in. long. Cut a suitable mortise to fit this tenon in the centre of the bar, in front. Note that the front edge of the leg is cut to a slope, shown quite clearly in the finished view of the article.

Glue the leg in place, and ensure a good fitting by making the joint a close one and well gluing it. To strengthen this part screw over the leg and bar, underneath, one of those useful steel furniture plates, as at (A). These plates, in several patterns, can be bought at almost any hardware shops. One ¾in. wide and about 3ins. long will serve nicely.

Handle Portion

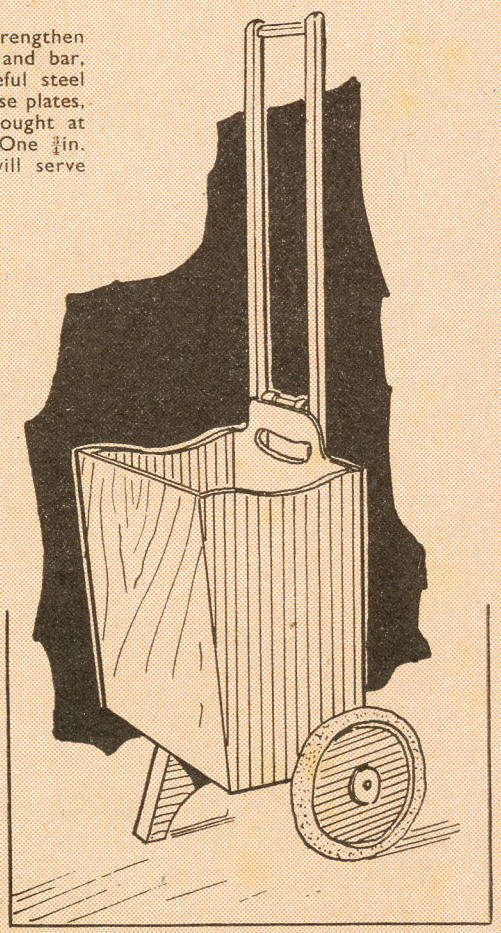
Fig. 2 shows the handle-bars. These are cut to the length given from ½in. by ¾in. wood. For 1½ins. up from the bottom ends reduce the bars to half thickness to fit the grooves already cut in the axle bar.

At the top, and about midway, fix across 5in. lengths of ½in. round wooden rod. These can be quite securely jointed across with round-headed brass screws. Glue and screw the handle-bars firmly to the axle, round off the top ends of them, then fit the rubber-tyred wheels on.

The Carrier

The carrier box or basket is a separate fitting. It is shown, with dimensions, in Fig. 3. The ends and bottom are cut from ½in. wood, or, perhaps, wood slightly thinner, say, ⅜in. would do.

The front and back are cut from plywood or a good quality substitute board, as may be available. It will be



seen from the diagrams that the back of the box is 2ins. higher than the front. In this an opening for the fingers is cut out, 4ins. long and 1in. wide. Give the edges a slight curve, as shown.

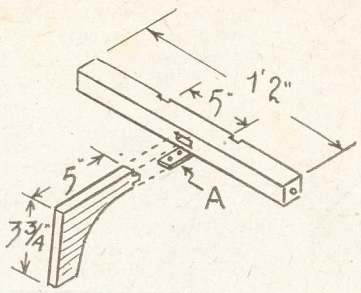


Fig. 1—Axle bar and front foot

MATERIAL LIST

Axle bar—1½ins. by 1½ins. by 14ins.
Leg—¾in. by 3¾ins. by 6½ins.
Handle-bars (2)—½in. by ¾in. by 2ft. 9ins.
Cross bars—10ins. of ½in. round wood rod.
Box sides (2)—½in. by 8ins. by 12ins.
Box front—13ins. by 12ins. plywood.
Box back—13ins. by 14ins. plywood.
Box bottom—½in. by 7ins. by 11ins.

The ends of the box are now glued and nailed to the bottom, and the front and back glued on and strengthened with the addition of a few small round-headed brass screws. When the glue is hard give the box a thorough rubbing all over with medium glasspaper, paying particular attention to the edges of the fingers hole. The box should now stand firmly enough on the leg of the carrier.

Prepare two bent metal fittings. These are 3in. pieces of brass or iron bar, ⅛in. thick and about ½in. wide, or thereabouts. Some 1¼ins. of these are to be screwed to the rear of the box, and the remainder bent over to just drop easily on the lower rod across the handle-bars, as in the inset, Fig. 3.

It is important these metal fittings should be just 5ins. apart, they will then keep the box in the central position, otherwise it may ride sideways, and foul the wheels.

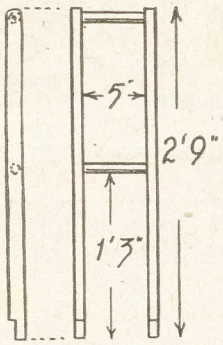


Fig. 2—Main framework and handle

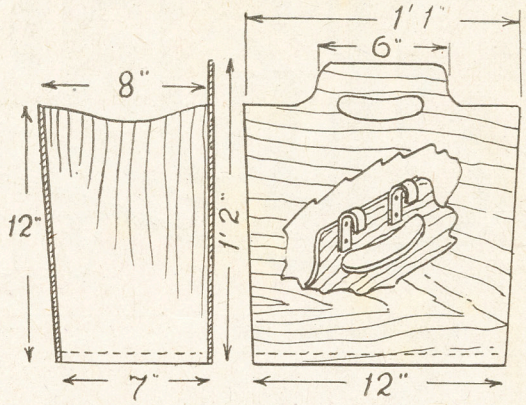


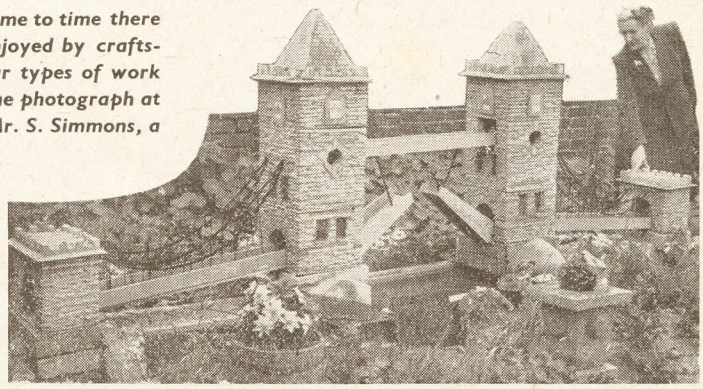
Fig. 3—Shape and parts of the carrier portion

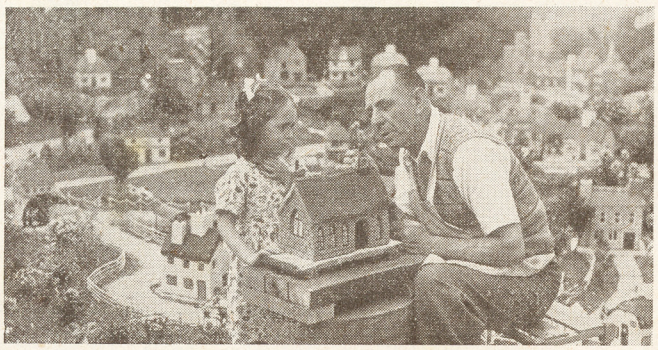
The box should not need any additional fitting and can be lifted up until the metal additions at its rear can drop over the top cross bar on the handle. In this position it will come about level with the shop counter and be convenient for packing the goods in. The box, well packed, it is lifted off and set to its former position over the middle rod for carrying away.

The whole article can be varnished or painted, as preferred. Probably a light stain before varnishing will be preferable if a white wood is employed for making. Use a varnish which will stand up to the weather and everyday usage.

Miniature Buildings for the Garden

PICTURES in these pages suggest from time to time there is no end to the variety of pastimes enjoyed by craftsmen. Here are illustrations of two similar types of work each carried out unknown to the other. The photograph at the top was taken in the back garden of Mr. S. Simmons, a retired master builder of Bridgend, Glam. He has constructed attractive miniatures from broken masonry and chipped tiles, and apart from the model of the London Tower Bridge shown here there are others of a lighthouse and an old Cotswold cottage.





THE one actually at work in the lower picture is Mr. Fred Slaymaker of Clensham Lane, Sutton, Surrey, who has built a scale model village in his garden. It is complete with church, castle, windmill, the 'Coach and Horses' Inn, post office, houses, etc. His cottages are historically accurate, there are roads and gardens around the village and even a flowing stream and its waterwheel.

Instead of the usual noisy bell you can easily fit

A DOOR GONG

MANY people object to the strident ringing of the average door bell, and wish for something a little less noisy and nerve racking. The door gong, illustrated, would meet this desire quite satisfactorily, emitting the pleasant sound of a clock gong, when the pull is pressed.

What is required for making this article are an old electric bell, and a clock gong. Many readers may have an old bell, or could, of course, make use of one already in service. A clock gong, if not in possession, could possibly be obtained cheaply from a local clock repairer or bought new, not being an expensive article. For the case a small quantity of fretwood is required, or cheaper wood possibly.

Case Parts

Make the case first. A front and side view (sectional) are given in Fig. 1, less the cover which hides the electric bell works. The width given will, most likely, suit the gong, but it is as well to purchase this beforehand, then if the width is not quite enough to accommodate it, a little can be added. The upper part of the case constitutes not only a mounting for the gong, but also a sounding board to amplify the tone.

The backboard should be long enough to allow ample room for the bell works to be screwed to it, with room each side for a wooden cover to fit over. Cut the backboard from ¼in. thick fretwood. To

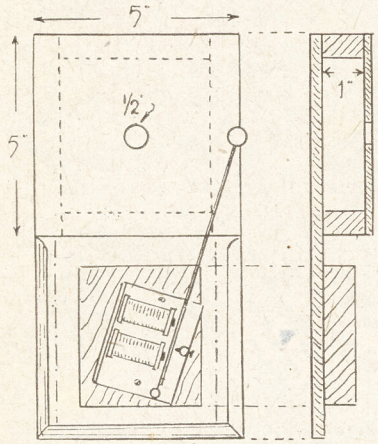


Fig. 1—Front and side view

the top portion glue a framing of ½in. by 1in. strips of wood, as shown by the dotted lines.

Over this glue a piece of ⅛in. wood, preferably of pine, as the sounding board. In the absence of anything better, a piece of well glasspapered chocolate box wood could serve. In the centre of it bore a ½in. hole.

Take the bell works, cut off the arm on which the bell is mounted, then cut a wood block a trifle larger on which the works can be screwed. The thickness of this block is important, as it, when screwed to the backboard, should bring the works to the correct height for the clapper to strike the gong.

Fixing the Gong

Fix the gong in place by screwing the brass block, to which it is attached, to the framing behind the soundboard, as seen in the general view. The exact thickness of the block can then be accurately estimated.

A little adjustment may be necessary here for the clapper to strike the gong most soundingly, the necessary battery and push being connected up, and the bell works tested. All being satisfactory, the gong can be removed for the time being, also the works, while the case is finished.

The side and bottom edges of the backboard are neatly bevelled off, then the dimensions of the wood cover over the works can be assessed. This cover, Fig. 2, is just a bottomless box, made up from fretwood, $\frac{3}{16}$in. to ¼in. thick.

The Cover

It should extend each side nearly to the bevelled edges, about where shown in Fig. 1 by the dash and dot line. It butts up against the lower side of the soundboard above, and comes level with the bevel of the bottom edge of the backboard.

Make up the cover to those dimensions and the inside deep enough to admit the works comfortably. In the front saw out a slot for the wire of the clapper to work in.

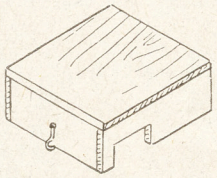


Fig. 2—Box cover

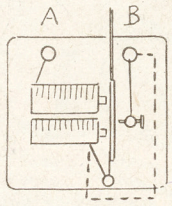
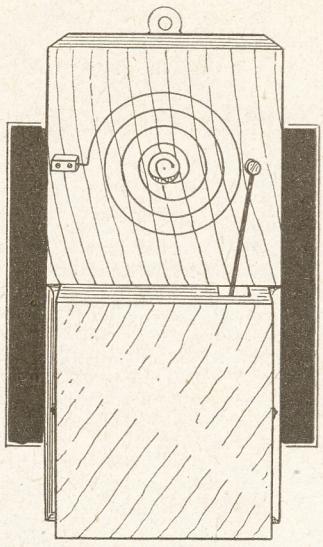


Fig. 3—The works

The cover is held in position with a hook fastener each side, the necessary screw eyes for the hooks being driven in the backboard. Alternatively, the cover could be hinged to the backboard one side, with a hook and eye fastener the other side. The latter fitting might be preferred of the two, as being less likely to shake with vibration.

The whole of the woodwork can now be well glasspapered, and the completed article stained walnut colour and varnished. The front of the sound box should be unstained, but can be varnished. At the top of the case a brass wall plate should be screwed for attachment either to the door, or wall of the



passage, or wherever the gong is to be positioned.

Battery and bell push are fitted, of course, as in the usual practice. It will be necessary, by the way, to cut a notch in the works' cover to allow the connecting wires to emerge, that of course, will be obvious.

For Single Note

As now fitted, the gong should reverberate when sounded, but to those who might prefer a single stroke some slight alteration to the wire circuit must be made. Quite a simple alteration.

A diagram of the usual connections is given in Fig. 3, from which it will be seen that one wire from the magnet goes to terminal (A), the second wire from the magnet going to the armature, and a third wire connecting the contact breaker to terminal (B). Leave the connection to (A) alone, and take the magnet wire leading to the armature, direct to terminal (B), as shown by dotted lines. This will do the trick.

Cleaning Gramophone Records

HERE is how to clean gramophone records and make old ones sound like new. Mix two parts of white vinegar to one part of light oil and stir well. Paint the records with it and leave for two or three minutes, then wipe with a clean rag and leave to dry. It will be found they play very much better.

A variety of lino-cuts can be made with

RUBBER PATTERN PRINTS

THE business of making lino-cut blocks is a very interesting art-hobby, but it has been described so many times, and is practised so extensively in schools, etc., that it is not a novelty. We mention it, however, because in taking up the hobby the participants have, in their mind's eye, the familiar rubber stamp much used in offices.

It is hardly practicable to gouge out a design in thick rubber as one does in soft linoleum, but interesting work may be done with sheet rubber taken from motor-car inner tubes. (Cycle tubes are a little too thin).

The sheet rubber can easily be cut with scissors and then mounted on a wooden block (Fig. 1). Naturally, very fine work should not be attempted. Keep to bold silhouette designs, as illustrated at Fig. 8. Remember that even the most weird and wonderful abstract shape as at Fig. 9 will, if repeated, as at Fig. 10, usually form a pleasing pattern.

The Design

A design is worked out on paper and then this is sketched on a sheet of rubber (a piece of opened-out inner tube). The rubber is then cut with scissors, just like paper. Small inside openings can be managed by pinching the rubber and then cutting across with scissors, though small parts can be cut out after the block is mounted. It is possible to cut out the various motifs first and then assemble them on the block, as in Figs. 11 and 12.

Sometimes you will proportion your design to fit an existing block of wood, though it is very easy to cut a small pad of wood to fit the block. The thickness of the block is not critical. So long as it is easily held the thickness does not matter. Cotton reels make useful handles, as shown in Fig. 2.

Waterproof Cement

A waterproof cement is essential for mounting the patterns on the wood. Rubber cement is useful. Whatever is used, follow very carefully the instructions on the tube. In many cases a layer of the cement has to be applied, first, to each of the surfaces and allowed to dry. Glue under pressure.

With a chisel or knife, make a cross at the top of the block (Fig. 3) and bear this always in mind to avoid the disappointment of having an upside-down print.

Rubber-stamp Ink

As regards ink, the usual office rubber-stamp pad may be used, but one can also employ water colour or powder colours with a little flour paste added to give 'body'. Oil paint (of the stiff kind sold for artists' use) can also be tried, so can printers ink (often sold, by art suppliers, in small tubes for amateurs' use).

The water paints can be brushed on with a wide brush, taking care not to have the paint too sloppy. Experience is the best guide here. The old paints can also be applied with a brush. Printers ink is best applied with a small rubber roller such as is used by photographers. Get a piece of glass (plate glass if at all possible) and lay a streak of ink across one end. Then roll out the ink until the glass has a uniform film of ink. Then either press the stamp on the ink or run the inked roller over the rubber stamp.

Suitable Paper

Practically any kind of paper can be used for printing except, perhaps, the very shiny and hard varieties. Printing can also be done on cloth (for head scarves, etc.), using fabric printing inks. Single impressions (on paper) make interesting pictures for framing and for such things as bookmarks, bookplates, monograms, etc. Remember to plan lettering *in reverse*, as in Fig. 6. Overall patterns (i.e., a simple motif repeated dozens of times on a 'half drop' arrangement—see Fig. 10—or on a honeycomb pattern—Fig. 4, can be used for making patterned papers for amateur bookbinding, wall papers, and so on.

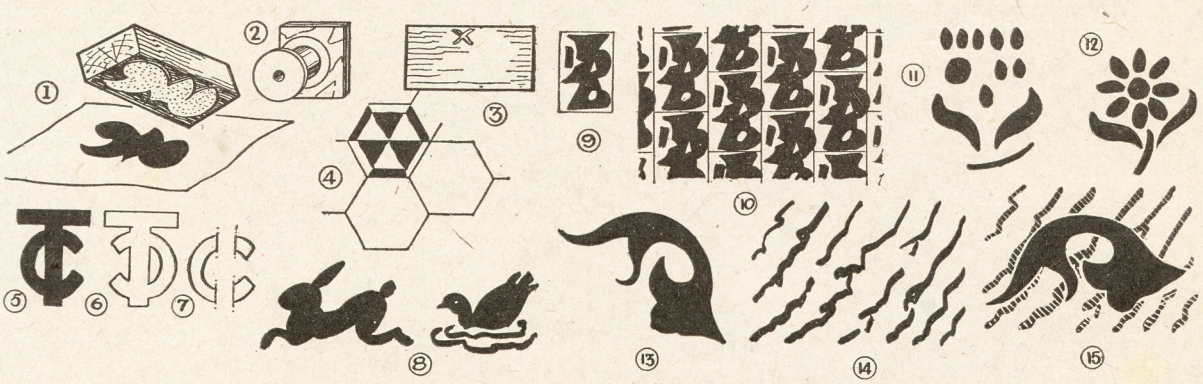
Do not expect, in an overall pattern, every impression to be exactly the same as regards definition, alignment and colour. It is the variations which give hand-done work its charm and distinguish it from mass-produced machine-made materials.

Monogram Marking

In cutting the monogram (Fig. 5), it will be easiest to cut a T and a C separately, then cut the C, as shown in Fig. 7 and remount the lot on the block. This is another example of the principle illustrated in Figs. 11 and 12.

Oil paint and printers ink are easily removed from the block with a little paraffin oil, so that the same block can be used for printing in different colours. One can have alternate stampings in, say, red and black. (Do all the red stampings first). One can stamp one design over another. In Fig. 14 (note that these are very much reduced in size from the originals) we see a block consisting of seaweed shapes which can be printed in blue-green. Another block, Fig. 14, has been cut in the form of a fish and this is stamped, in a different colour, over the seaweed (or, to vary the design), the seaweed can be stamped *over* the fish (Fig. 15).

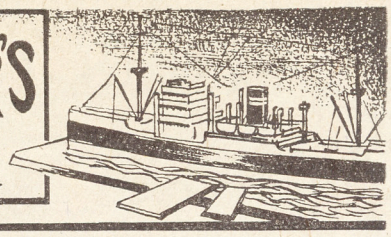
Owing to limitations of space, Fig. 15 shows just one fish on a small portion of seaweed, but the main idea is to have a background possibly several square feet in extent and to have a number of fish, not evenly spaced, but in groups and at varying angles. Try them out in various positions and distances for the best effect.



Guide Lines

In connection with Fig. 9, it should be pointed out that the rectangular outline merely indicates the area of the wood on which the design is mounted. When using such a 'half-drop repeat', as at Fig. 10, it is an advantage to rule guide lines faintly in pencil, but when using an hexagonal block, as at Fig. 4, no guide lines are needed. Those that the artist has drawn are merely to show how the pattern repeats.

The SHIP MODELLER'S Corner



IN this, the opening article of a new series, let us consider those details that make a good ship model. They are, in my opinion, sincerity, accuracy of technical details, and good craftsmanship.

The first, sincerity, is often lacking in models that are splendid examples of craftsmanship. There is something absent and the first thought on seeing such a model is, 'What fine workmanship' or 'What a beautiful ornament it would make'.

On the other hand is the model whose workmanship is not above average, sometimes even mediocre. And yet the first reaction to this model is something like this:—'What a fine ship, she looks almost ready to sail'.

Where lies the difference in these two models? I would say that one has sincerity, while the other lacks it.

Now, presume you have decided on your ship and obtained your kit or plans. Before commencing work think around your ship and its history. Try to see your ship as she was in her original prototype. Use your imagination to visualise yourself standing on her deck, feeling the spray on your face, hearing the wind humming through the rigging and looking up at the sails swelling outward, full of wind.

Conjure up in your mind the vision of her captain and crew, their life on shipboard both above and below decks. Travel with them on their voyages and share in their experiences. You can do, you know. Use your local library and read the books of such writers as John Masefield, Keble-Chatterton, Frank Bowen and Basil Lubbock. These men know and love the sea and their books, more enthralling than any thriller are full of the romance and mystery of the sea.

To learn something of the daily life, on shipboard, of the early sailors read the books of Smallett, Capt. Marryat and Daner and other worth-while writers of the sea.

The Ship Modeller's Corner
A New Regular Feature
By *'Whipstaff'*

If you approach your model in this way, believe me, you will gain added interest and enjoyment in the building of your little ship. You will put into it something of your own enthusiasm, some of the knowledge you have gained and, instead of a model of wood, cord and paint, you will have a live little model that has in her very appearance something of the spirit and romance of the sea.

Our second point, Accuracy of Technical Detail need not deter anyone from making a model. It is quite possible, even in a simple model, to see that what few details are incorporated, are correct.

There are plenty of models about which, though beautiful creations of the craftsman's art, are not *Ship Models*. In some cases the hull is of such a shape that no ship like it ever sailed the seas. In some, the colour scheme seems to have been inspired by a child's cheap painting book. Yet others have rigging which would give any seaman of the period a nightmare were he called upon to handle a ship rigged in such fashion.

To avoid this sort of error is not difficult, for there is plenty of accurate information available for the modeller who is prepared to do a little research work on his own. And very interesting such research can be.

It is because we know that the large majority of amateur ship modellers have neither the time nor opportunity for such research that this section of *Hobbies Weekly* has been called into being.

This is *your* corner and we invite you to make full use of it. Have you a problem or difficulty with your model? Or would you like to know something of the history of the original ship? Do, please, write in and let us help you.

The articles and notes appearing in this page of our magazine will cover all subjects connected with ships and ship models of interest and practical use to model makers. Such information, based on personal research and reference to the works of the leading authorities in Maritime History and Naval Architecture, will be as accurate and reliable as present day knowledge can make it.

Articles will also cover home-made tools, methods of construction used by amateur and professional model makers in obtaining their result. Our aim is to make this feature of such practical use, that even the beginner can turn to making his first piece of work confident that he can complete a worth-while representative model.

Hobbies Old-Time Ship Designs while, of necessity simplified to enable anyone to build a satisfactory model, are in the main details, historically accurate and form an excellent basis on which the more advanced modeller can use his skill and knowledge to make a model of real value.

In future articles I will deal with separate kits in the Hobbies range, incorporating details based on my own research when building these particular Ship Models.

I would suggest you obtain a loose-leaf book, quarto size. Cut out each article when it appears and paste on one of your leaves. Insert the leaves in alphabetical order and within a few months you will find your book growing into a unique and valuable work of reference, always at your hand to help you build finer and better models.

On the point of craftsmanship, given the right tools and material, together with patience, it is a matter of practice. You will be surprised how quickly skill will develop.

And now, a hearty welcome to all ship model makers, to their own corner.

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Something New in Model Boat Building

By D. H. Matheson, *Pub.* Hutchinson's

THIS is a book to delight the heart of any young model maker and, indeed, older modellers with young sons. The author has provided us with eighteen models ranging from a South Sea Outrigger canoe through the pageant of shipping to the modern Electric Launch.

A volume that really lives up to its name. It is different, its great attraction being that while all models are simple to construct, being designed especially for the junior modeller, they are all working models. Tools required are few and materials cheap to obtain. There will be no difficulty in the building of any model from the clear instructions and drawings.

From an educational and instructive viewpoint this is one of the best juvenile books I have seen. The range of models covers many different methods of ship propulsion from sail to steam and even jet propelled and electrically driven models. Whatever the interest of the young craftsman, whether small sailing craft, power boats or a submarine that actually submerges, he will find it between these pages. I believe even the older modeller will find interest in the sailing model of a Galleon.

At the modest price of 5/- it is excellent value and will make an ideal gift for any who delight in making models, providing him with many hours of real enjoyment.

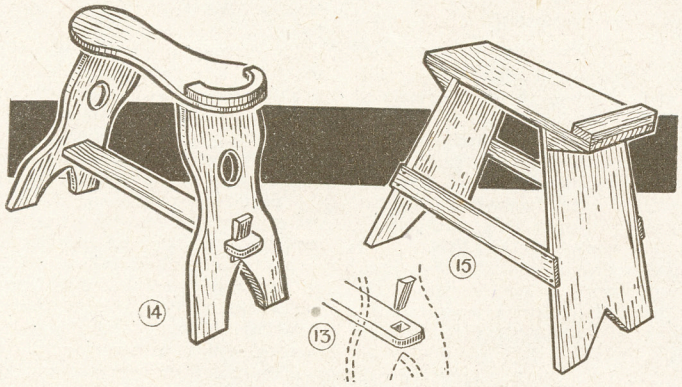
Choice of a simple and a more elaborate type of

SHOE-CLEANING STOOL

ALTHOUGH a boot-cleaning stool is not exactly a glamorous article, it is extremely useful, and every household should have one. We show, herewith, two versions of the same model. One (Fig. 15) is quite plain and will serve in an average household. The construction is quite straightforward.

An Alternative Type

The other (Fig. 14) is a more elegant model suitable for, say, a hotel or boarding house bedroom. For such purposes it is well worth while to go to the extra trouble of shaping the curved parts.



Straightforward Model

We will describe, first, the simple model (Fig. 15). The top (Fig. 7) is just a plain piece of 15ins. by 5ins. by ½in. plank. The front and back pieces (Fig. 6) are, respectively, 16ins. and 14½ins. long, tapering from 5ins. to 7½ins., as shown. The inverted V-shaped notch at the bottom is not just for decoration but to enable the stool to rest more firmly on a slightly uneven surface.

The only parts likely to cause the slightest trouble are the blocks (a) and (b). (Fig. 5 and also on Fig. 1). The best way to get the bevels is to make cardboard templates, as in Figs. 11 and 12, Fig. 11 being used for (a) and Fig. 12 for (b). These templates may well be made twice the size (or even three times). They can also be laid out on the edge of a smooth plank and an adjustable bevel set from them.

The blocks are shaped up from 3ins. by 1in. section stuff, 5ins. long. The position of the blocks is clearly seen in the diagrams.

The side rails, seen in Fig. 15 are of about 2ins. by ⅜in. stuff and are best cut to about 18ins. long. They can be cut to exact size, flush with the ends of the stool, after being fixed. A neater job would be achieved by making grooves and letting these rails in flush with the sides. The stool will be about 14ins. high at the back and 16ins. at the front, and the legs will be about 18½ins. apart at the bottom, as shown in Fig. 1. (The rail in this drawing refers to the more elaborate model). The grooving must be undertaken carefully to make a neat job for which accurate marking is essential.

A simple piece of 1in. by ½in. wood fitted across the lower end for the shoe rest completes this model.

For the more elaborate model, the top and the front and back legs are cut to the same size before, but are shaped. For this reason, ⅜in. plywood is recommended. Figs. 9 and 10 give, respectively, the half-shapes for the legs and the top.

The Legs

As regards Fig. 9, remember that the legs are in two different lengths as before, though only one length is shown in Fig. 9. The slot to take the cross rail is nominally 2ins. by ⅜in. but, as Fig. 16 shows, adjustment must be made for the fact that the rail does not pass through the legs at right angles.

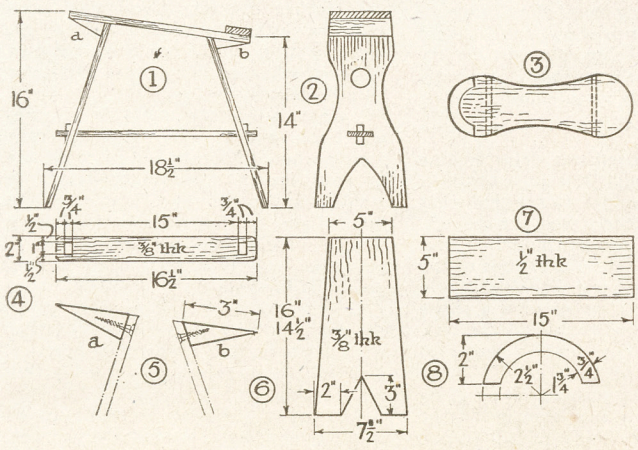
The rail itself is shown at Fig. 4. This is of ⅜in. plywood. It is better to mark out the holes (for the wedges) after the stool has been partly assembled.

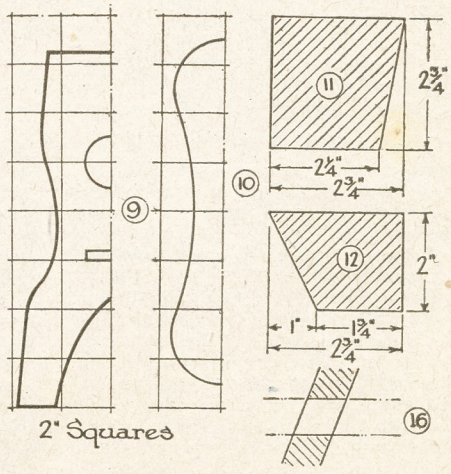
The blocks (a) and (b) are made as before. The action of the wedges is clearly seen in the diagrams, particularly Figs. 13 and 14. The wedges should be of hardwood and neatly cut so as to have a decorative purpose. The wedges, as drawn, will only prevent the legs splaying outwards, and, in actual use, this is what is required. It is possible, by extending the slot, to have wedges on both sides of the legs. A touch of glue on the wedges before final knocking in will make a firm fixture.

Shoe Rest

Both in the simple model and in the more elaborate one, the top and bottom edges of the legs need a slight bevel.

The shoe rest (Fig. 8) is cut from thick plywood. It should be quite ½in. thick, so that two or more pieces of thinner wood can be cut and glued together. For finish, glasspaper well and give two or three coats of copal or spar varnish.





An attractive and colourful model of any popular

OLD CURIOSITY SHOP

THE quaint old model 'Curiosity Shop' here described is based on a picturesque weather-boarded cottage in a Kentish village—a good example of old-world architecture. Readers in London may be able to compare it with and obtain 'local colour' hints from the quaint Curiosity Shop (reputedly Dickensian) in Portugal Street, behind the Stoll Theatre in Kingsway.

First cut out the Upper Front (1) in $\frac{1}{4}$in. plywood to the dimensions given in the drawings. The chain-dotted lines indicate the position of the roof, chimney and dormer window—to be fitted later. Note the window-opening to be cut out. Two *Upper Sides* (Part 4) are required. The window is cut *in one side only*, the other piece being a perfectly plain rectangle, measuring $6\frac{1}{8}$ins. by $2\frac{1}{4}$ins.

A pair of *Lower Sides* (5) is cut in $\frac{1}{8}$in. plywood. Here again, the window is cut in one piece only, whilst the other side is quite plain. The diagonals, by the way, indicate where a part is to be cut out. They are *not* window bars. A *Base* (6) is cut to the dimensions shown.

Take the Upper Front, and glue it over the Lower Front so that it overlaps by $\frac{3}{8}$in. Similarly fix the Upper and Lower Sides. This done, nail the Front and Sides to the Base. Fig. 2 shows the work in progress.

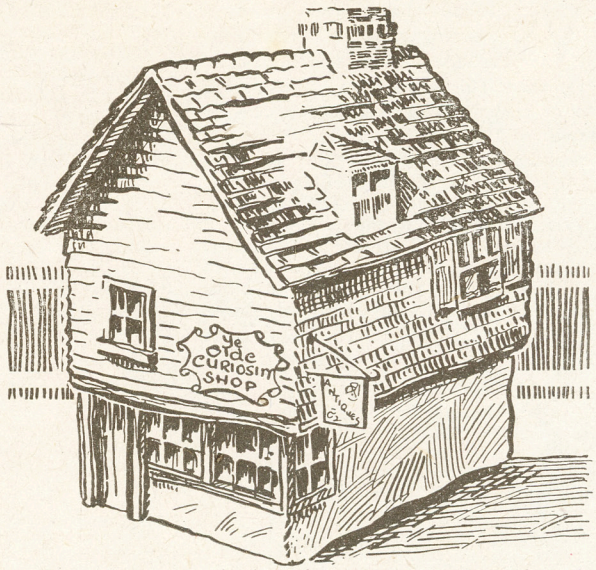
Weatherboards

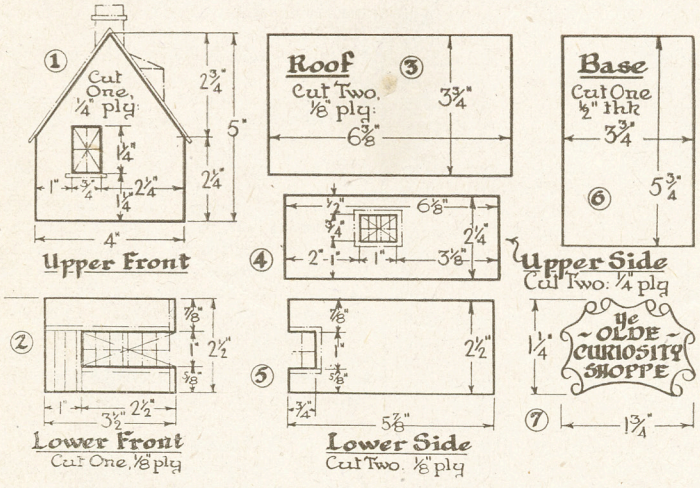
The next step is to glue lengths of $\frac{1}{8}$in. square stripwood around the windows, the door-posts, etc. See there are no ragged edges to the cut-out windows. Two lines are scored on the door where shown to represent planking. The Upper Front and Upper Sides are now 'weather-boarded' with strips of fairly stout cardboard $\frac{3}{16}$in. wide, and rather longer than actually required, applied with glue, and tacked down, if necessary, with ordinary pins, the points of which are afterwards removed. Lay the bottom one first, and the next over it, slightly overlapping, as in actual weatherboarding. Do not trim the ends until the glue is quite dry.

Smear the lower sides with plastic wood, alabastine, or one of the new plastic paints, to give the effect of much patched, bulging walls. The plastic wood, etc. will hold better if you scratch and pit the wood with the point of some sharp tool.

Before the windows are 'glazed' the carcase made so far can be coloured. It will be found more convenient to fit the roof afterwards. Poster paints are used: green or brown for the woodwork of the windows, door, etc., yellow ochre for the lower walls, and a light brown for the weather-boarding.

As with all such models, care should be taken to give the effect of antiquity and not of careless painting. When the paint is dry, a coat of varnish should be given. This not only fixes the paint, but prevents dirt working in. Use the varnish in a warm room, so it runs fairly easily and does not "pull."





Windows

The windows (except that of the dormer, Part 9) can now be glued in from behind, care being taken not to let the glue ooze out on to the front. The 'glass' is actually celluloid from old roll-film; either negatives that are perfectly blank, or where the image is very faint. There is no need to soak off the image in this case. The greyish look will give the impression of rather grimy windows.

Draw the window bars full size on a piece of paper. Then lay the celluloid over and trace with indian ink, if possible. Allow about $\frac{1}{4}$in. margin all round for fixing.

Ordinary tube glue fixes the celluloid. Curtains, cut from scraps of paper are pasted behind the windows in the upper portion, which represents domestic quarters, whilst the back of the shop

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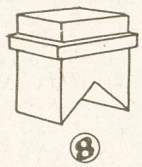
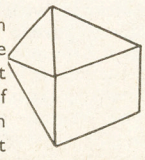
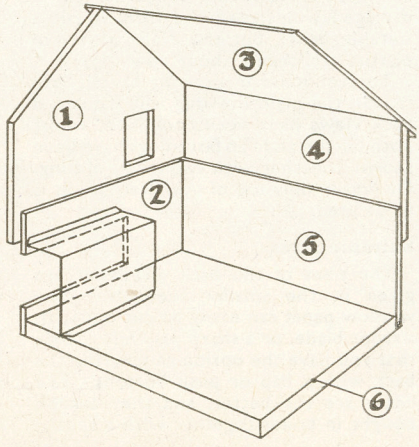




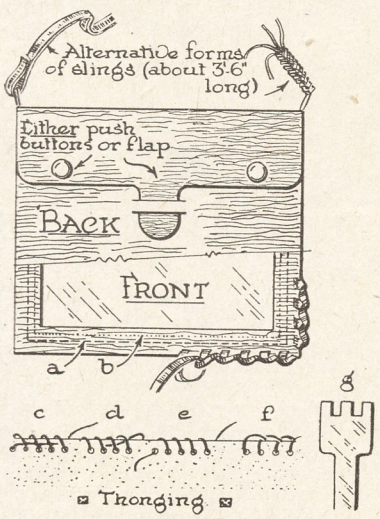


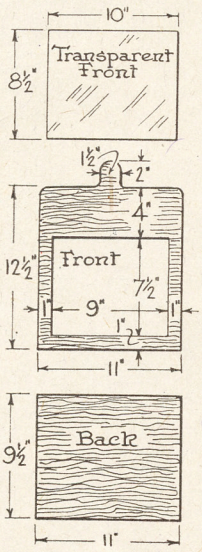
Use an old bag to make this

HANDY MAP CASE

WHOLE villages swallowed by a yawning crater; main roads rent asunder by chasms; footpaths vanished! This is the state of most maps after they have been used a season or two. This tatterdemalion sheet is supposed to guide you along intricate ways! Hikers might justifiably plead that they cannot afford a decent map case. Well, why not make one?

The map case illustrated is of leather, of such a size that it will hold a one-inch Ordnance map with two sections showing. A small case which only shows one section is not much use, as in order to fold the map to bring a particular section to view, a clumsy packet results.





The window is of celluloid, whilst it has a strap so the map may be slung under the right arm.

Leather is used for the case. The writer cut up an ancient portmanteau, but many readers may have to buy it. For the window the writer bought a damaged windscreen and from it cut a suitable panel, but there are plenty of plastic, etc. sheets about nowadays.

To economise in drawing space, note that in the main drawing, the front and back views have been combined, whilst both button and flap fastenings have been shown, together with two forms of sling. Obviously only *one* of the alternatives is to be used.

Suitable Sizes

The sizes of the back and front are given in the smaller sketches. The window panel can easily be cut out with a razor blade, or a sharp penknife. Note that you have the option of securing the back with a flap or push buttons. The latter are the better, and they can be bought in boxes together with a special punch and die. If you make use of a flap the slots for it are easily cut with a knife.

Before the front and back are joined the window must be sewn in. There is practically only one way to do this—on the sewing machine. The ends of the cotton must be made secure. The machine stitch is unlike that of the needle, and a pull at one end will result in the whole chain of stitches coming undone. There is no means of re-machining once the article is made up.

Thong Joint

A good way of joining the two pieces is with a leather thong, as shown. Alternatively you can sew them together with an overhand stitch, using shoemaker's wax thread (obtainable on a card, with needle) and making the holes with an awl.

Should you use a thonged border, it is as well to match it by making a plaited loop, as shown on the right. Otherwise a plain narrow leather strap is used. The length of the loop depends on the wearer.

Artful and crafty people will now want to decorate the case, probably with Red Indian tracking signs. Don't overdo the Buffalo Bill touch. The leather thonging and plaiting are sufficient decoration in themselves, and lift the case out of the rut of the mass-produced shop-bought article.

Thonging is more quickly done if a thonging punch (shown at (g)) is used. With this, one can punch a line of holes, and then move the punch along, placing a prong against a hole just punched and rapidly and neatly making a line of holes.

The sketches at (c) (d) (e) (f) are diagrammatic only, with the thongs shown as single lines and the slots as plain holes. The first sketch (c) shows a simple way of starting thonging.

The thong is laid against a few holes and the thong is simply taken over and over. The end of the thong that is to be clamped down may well be tapered off in thickness with a knife. It will be much easier to thread the thong through the slots if a piece of tin-plate (cut from any old tin can) is bent round the end, very similar to a tag on the end of a shoe lace.

The sketch (d) shows how this thonging is ended. The end is just slipped under the turns. The sketch (f) shows another kind of thonging. Indeed, books on art leather-work should be consulted if further details are required.

Some Electrical Replies of Interest

Telephone Wiring

I HAVE bought an ex-govt. self-energised telephone set. There are only two wires required, but would it do any harm to the telephone magnets if I used one wire for a bell circuit to run off a transformer on A.C. mains? (J.C.—Wallasey).

HAVING one wire common to both telehpone and bell circuits will not harm the telephone units, provided the return circuits of both bell and telephone are kept separate. If the bell is operated from a bell transformer from the mains, however, severe humming will probably be caused in the telephone receivers, and this would make wholly separate circuits necessary.

Interference

I AM picking up very bad interference from electrical gear, e.g., when someone switches on a light in the house. It is not coming through the aerial, but actually through the mains as it is still there with the aerial off. Is there any way to cure it? (R.G.H.—Nottingham).

THE usual cause of hum developing in an eliminator is a broken down smoothing condenser, and a condenser known to be in good order should be connected in place of the present condensers. Other possible causes exist, but from the details given this seems most likely. Mains-borne interference is difficult to eliminate, and should if possible be suppressed at the source. However, an improvement can usually be obtained by connecting condensers of about ·05 mf. (500 volts working) from the mains leads to a good earth point. If necessary, further suppression may be obtained by including mains-type H.F. chokes in the leads.

Battery Trouble

I HAVE made an electrical beam engine which runs quite smoothly off a 6 volt car battery. I have since bought a 6 volt dry battery but the engine does not run off that. Could you please tell me what is wrong? (C.B.—Bristol).

IF the engine operates satisfactorily from the accumulator but not from the dry battery, the latter may not be 6 volts, or may be in poor condition so that its voltage drops severely when current is taken. As a dry battery cannot deliver a heavy current, take particular care that all moving parts work with absolute freedom, and that the contact is correctly adjusted as explained. For a 6 volt dry battery 24 to 26 S.W.G. wire should be more suitable; this will enable more turns to be got on. The greater the number of turns, the greater the solenoid's pulling power, but very thin wire must not be used or the current flowing will be too much reduced.

An attractive and unusual piece to make—

A TOY OPEN FRUIT STALL

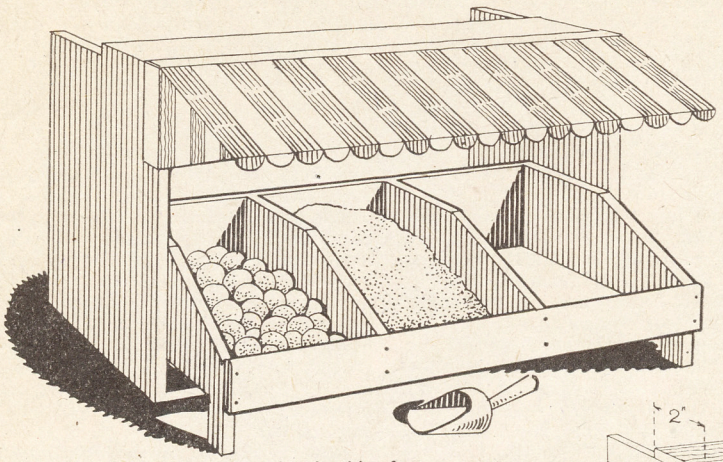


Fig. 1—Just the plaything for a youngster

HERE is a topping little model to make, and one which should give endless fun to the youngsters. It is for a Toy Fruit Shop, and is of ample size for dealing out the goods to the young customers. It measures overall 14ins. long and 8ins. wide and 8ins. high.

The simplest of construction is adopted throughout and the whole thing should not take longer than a couple of evenings to make. Wood ¼in. thick is used, and glue and nails hold all the parts well together. Our sketch, Fig. 1, gives a good idea of the finished shop which consists of a more or less open-fronted frame of wood with the three or more racks for the goods in the front. Above the racks is an oriental type canopy which greatly helps the attractive appearance of the whole thing.

Although the main measurements given make a conveniently-handled shop for the younger folk, there is no reason why these measurements should not be increased if a larger number of racks or compartments is needed. There is also the possibility of making four racks in the length of 14ins. instead of only the three shown.

A New Plane

IT is advisable to treat a new plane before using it. All you need is a very little putty and a small quantity of linseed oil. Fill hole in plane with putty and pour in all linseed oil. Let all of this soak in the grain of the wood which it should do over-night. This will prevent any likelihood of the plane splitting and will lengthen the life of it as well as making it run very smoothly.

Commence construction by marking out and cutting the main floor (A) in Fig. 2. This measures 14ins. by 3½ins., and to this are attached the upright ends (B), measuring 8ins. by 3½ins. Cut all these pieces square, using for the purpose a square and for the cutting a coarse fretsaw.

Connect the tops of the pieces (B) with a narrow board measuring 14ins. by 2ins. Put some glued blocks in the angles under (C) to further strengthen the joints.

The Racks

For the ends of the racks we shall want two pieces cut to the shape and dimensions shown on the right-hand end of the frame, as (D) in Fig. 2. After making one end, lay this on the next piece of wood and draw round it to get both shapes identical. For the interior divisions of the rack, two or three, according to the number of spaces required, will be cut to the outline shown as detail (G) in Fig. 2. These are again of ¼in. wood, of course.

Next mark out and cut the floor of the rack (E) in Fig. 2. This is 13ins. long and 5ins. wide, glued and nailed between the two ends (D). To the back edge of (E) and also to the back upright edges of the ends (D), the back of the rack (F) must be glued and nailed. This piece is 13½ins. long by 3ins. wide, and before fixing, the top edge should be rounded with coarse and fine glasspaper. The back edge of piece (C) should also be rounded off.

The interior divisions (G) may next be added and glued to the floor and to the back (F). Wherever possible add some wooden block fillets, glued well in the angles to strengthen the joints. If triangular stuff is unobtainable, then some odd small blocks can be cut from the ¼in. wood.

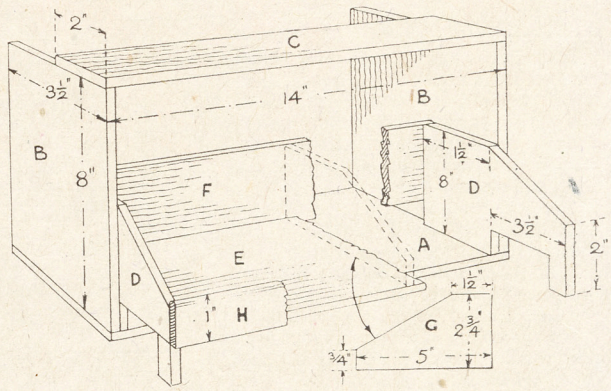


Fig. 2—Cut-away view showing constructional details

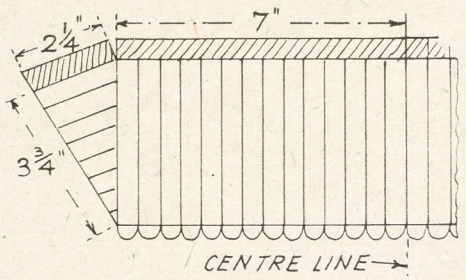


Fig. 3—Shape and size of canopy

The front (H) of the rack is 13½ins. long and 1in. wide and ¼in. thick and the top edge should be rounded as shown. Glue and nails are used as fixing here.

At this stage all surfaces of the parts should be given a rub up with glasspaper previous to painting in bright colours. A further interesting addition will be the striped outside canopy. This must be made of stoutish card, and the diagram Fig. 3 shows the dimensions, etc., for marking out and cutting.

Half only of the canopy is shown, and note should be taken of the shaded portions to the back edges. These form the gluing strips which go on the roof (C) of the model and on the end (B). The stripes on the 'canvas' are spaced at ½in. intervals and every other one should be painted red. The valance hanging down might be scalloped with the scissors.

Small metal scoops can be bought, such as is shown in our picture for dealing with the goods in the racks.

These simple gadgets and space savers are practical

IDEAS FOR THE HOME

SPACE saved in the kitchen or scullery is always a welcome move. Quickly adapted rails on which to dry off clothes and dusters can be made on the end of the existing draining board. If you have not the space here perhaps you can get three or four on the edge of the table.

Measure up the width of the usual cloths when folded in half and plan the supports to fit these and fold away as in Fig. 1. You should taper them at the ends and well glasspaper all rough edges down. Two will have to be set back to allow the middle one to fold in. By this arrangement you will have to turn out the centre one first and then the two side ones.

A Bath Economy

Space in the bathroom is often limited when there is a baby in the house. In the sketch at Fig. 2 is shown a board which will conveniently fit across the large bath and thus prevent the energetic youngster from causing so much spare water when he or she splashes about.

The board must be made to fit firmly on the bath with the two 1in. by 1in. square struts. It is reinforced with rubber strips which one can pick up at the store so it does not damage the bath and also keeps it from sliding about.

The main hole in the centre is made to take the small bath of the papier mâché type which is in general use to-day. Make the board a fair width so there is no fear of the unit falling over. Apart from being useful, it prevents the person bathing baby from bending so much. Also, all the accessories of the bathing job are close at hand.

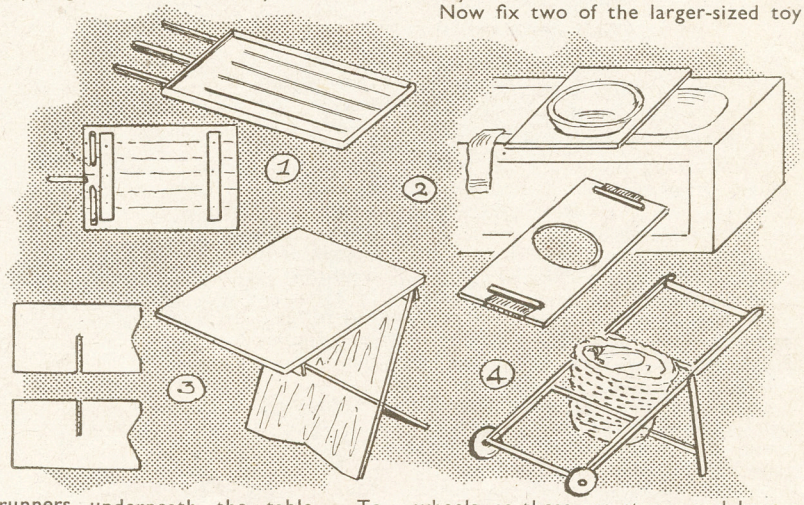
Folding Table

When sitting around in home or on verandah or even in the garden, provided it is not damp, it is useful to have a quickly knocked up table for playing cards or games. This table illustrated at Fig. 3 is of the knock-up type because it has not delicate legs to get damaged.

Plywood squares are now available at most woodyards and some of them have the 4- and 5-ply variety. The square for top should be at least 2ft. by 2ft. To keep it firm and hold the legs you require two pieces of wood 2ins. wide and 1in. thick which should be screwed the full length and 3ins. in from the edge.

For the legs you can use hardboard panel which is light and durable. Measure the height at which you want to have the table and adjust the leg measurements to come to this, bearing in mind the fact the table legs cross over as shown.

The leg panels can be shaped at the base as illustrated and are then cut in the centre with two slots going half-way across. This allows the two sections to slip together and fit firmly inside the runners underneath the table. To dismantle the table take off the top and then slide the legs apart.



Garden Runabout

When collecting the vegetables from a large garden or when you want just a few odd tools it is handy to have something in which to hold them without always having to get out the garden barrow. If you have an old deck chair frame you can use it for this purpose as seen at Fig. 4.

Remove the chair part to leave the two sides and the original stand down part. The top rail will make a convenient handle. Put another rail across so you can make a small light box to fit, with a ledge round the top. In this you could keep a few of the smaller tools used for light jobs, fork, dibber, trowel and lines.

For collecting the vegetables one can have a basket obtained from the greengrocers and to which you could add handles. Failing this the greengrocer often has light wood boxes which would suit you.

Now fix two of the larger-sized toy wheels, as these are strong and have a wide tread which is more suitable for the lawn and garden. When not in use the boxes or basket can be removed and the framework folded up for storage purposes. (252)

Curiosity Shop—(*Continued from page* 375)

window is formed from cardboard bent up and glued in place as seen in Fig. 2.

Now make the Roof (3) which is formed of two pieces of $\frac{1}{8}$in. plywood each 6$\frac{3}{8}$ins. by 3$\frac{3}{4}$ins. These are nailed on to the sloping side of the front, so that the front as well as the side projects in an eave. The upper edge of Part 4 will probably need bevelling. There is no back to the model, though the modelmaker can easily provide one if he desires.

Chimney and Tiles

The chimney (8) is shaped from a 1$\frac{1}{4}$ins. by 1in. by $\frac{3}{4}$in. block with a $\frac{1}{4}$in. square stripwood surround. The shape of the Vee can be ascertained by reference to the shape of the top of the Upper Front. The dormer (9) is made up from a solid block as shown. The front measures 1$\frac{1}{4}$ins. by 1in.

It now remains for the roof to be 'tiled'. This is done with strips of corrugated cardboard, about $\frac{5}{16}$in. wide, the grooves, of course, being vertical. 'Stagger' the strips very slightly, to give the impression that each tile has been laid separately. Use plenty of glue, and press the strips down by pressing the valleys of the cardboard with the tip of a pencil. Tiles can also be modelled in Pyruma or similar modelling paste.

The roof is given a coat of size and, when dry, painted red. Before painting, neaten up the ridge and edges of the roof with plastic wood.

This completes the model in its simplest form, but there are a lot of ways in which skilful modellers can add more details. Try to visit actual old buildings for details. Take, for example, the windows. The sash windows in the upper front could be shown half open or fitted with shutters. The dormer windows could also be shown open.

Weather-boarded houses of this type have often been repaired by cutting many of the boards away, in a rectangular shape, and inserting fresh boards, not always in perfect alignment with the original work. This sort of thing could be shown on the model.

When cutting the strips for the 'weather-boarding', for example, have a slightly irregular edge. Do not have a pre-fab-like precision.

The words 'THE OLD CURIOSITY SHOP' can be painted on, as indicated in the drawings, and a swinging sign provided at the side. The model can be mounted on another, larger, base modelled to represent a pavement, etc.

How the handyman can easily and cheaply make a

USEFUL GARDEN ROLLER

A GARDEN roller is a very useful thing to have, for with one it is possible to keep your grass plot in much better condition, for nothing so quickly stops those inequalities that come in even the best cut turf, like a periodic rolling after rain.

But garden rollers are dear, and your piece of grass may not be large enough to justify the expense. Here, however, is how you can make one of these useful items for a very few shillings.

The main thing required is a paint or oil drum of the kind that has no outside binding—that is, one that presents a smooth outer shell from upper to lower rim. It need not be very large, but on the other hand, a too small drum cannot be readily made weighty enough to give satisfactory rolling.

The Spindle

Having obtained the drum, the next thing is to get from a blacksmith a metal rod about ½in. diameter of such a length that it will pass right through the drum from end to end and leave about 4ins. protruding at either side, see (A) in the figure.

A thread must now be turned on the end of this rod for a little more than this distance in at either extremity. The smith may be able to do this for you, if not, the threading could be done at any of the bigger working ironmongers, or of course perhaps you have the stock outfit yourself. You will also require nuts to fit on the threaded ends.

The next thing is to find the *exact* centres of the top and bottom of the drum. This must be done with some care, it being best to try several methods as a check one against the other. Thus, a paper circle can be cut just to fit the end. This is then folded in half and then folded in half again (D). Placing the sector so formed back on the drum the point of the paper gives the centre.

This can be checked by taking several diameters and halving, while a final check can be made with an improvised compass made by screwing two pieces of wood together, or with a blackboard compass if you have one.

Being sure of the centre, now with an ordinary small scribing compass make two circles at the points found, of the diameter of your bar, the whole idea being to run the bar through from side to side and screw it in position with the nuts.

Adding Weight

Before final fastening, however, we must give the roller weight, and this can be done by inserting the rod and turning the drum end in soft ground (so that the protruding bit of rod will sink in) filling it with sand.

A better job is made if this filling is with a rough-made concrete, that is, a little cement mixed with plenty of sand. This makes the inside of the drum solid and there is no likelihood of dents appearing should the metal receive a knock. Once filled, the lid is put in position and the second nut fitted and taken tightly home.

The Frame Handle

We now have a quite heavy little roller, complete with axle, and the next thing is to fit the simple frame handle as indicated. Here the bearings are the only parts that need any detailed explanation, the rest being straightforward. Obviously if the axle ends (especially as they are threaded) ran on the wood they would very soon wear this away and form a groove, so the points of contact must be metal lined.

The main members of the frame (a) are of 1¾ins. by 1¾ins. section if a soft wood is being used, narrower, if fairly tough strips can be obtained. They must not be less than 3ft. in length but can be slightly longer with advantage. Much depends on your own height, but it is always easier to push and pull a roller if the angle of the handle to the ground is not very great—that is, the flatter the handle angle, the easier the manipulation.

On to the underside of these members the bearings are secured and these are two garden gate bolt-holders of the heavier kind. If desired, the bearing can be made up of two strips of metal, the one flat, and the other bent to a semi-circle in the centre to take the axle end. Corresponding holes are drilled in these pieces which are then held in position by two stout screws.

The Editor is always pleased to receive suggestions from readers on what they would like included in these pages.

Easy Running

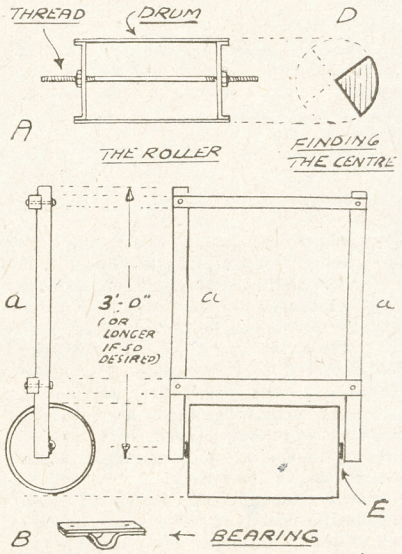
When finally fitting the frame to the roller two thick washers go either side of the axle between the locking nut and the wood as (E). These both give easier running and act as spacers keeping the drum from the spars.

The handle square is a simple frame made up of the main spars and two cross-pieces, the one just above the drum and the other across the top, which as well as completing the square acts as a pushing bar and so for comfortable gripping should have its edges rounded off.

The length of these cross-pieces depends of course on the size of the drum being used so no dimension is given. Slightly sunk joints are used to give greater rigidity (but not full half joints as these would tend to weaken the main members too much) and these are completed with a nut and bolt each.

Bolts are better in this case than screws, as tightening up can be readily effected with a spanner should vigorous work loosen the frame at any time. Give the nuts and threads a touch of grease when fitting.

Our roller is now completed and a very efficient article should have been produced. It still requires a coat of paint however, to preserve against rust and rot and also to give a neat appearance.



Any single colour will do of course, but green for the handle frame and red for the ends of the drum is an effective combination for two colours. The iron of the bearings can then be picked out in black, with advantage.

Another chapter on our series of binding—all about

BOOK FINISHING

WE have dealt, in the two previous articles, with the technical side of simple bookbinding, and in this, the third of the series, it is time to consider the artistic and decorative aspect.

The possibility of a two-colour binding has no doubt occurred already to some readers, and we shall be best served if we begin applying decorations to our methods with this. There is another kind of standard binding besides the full cloth kind so far described.

This has its origin in the desire for additional strength and protection at the point most heavily worn, namely the spine, which was bound in leather. Of late however, a trend towards quarter bound books which have cloth on the spine only but are finished in thick paper, has appeared from the economic viewpoint, since it gives a considerable saving in cloth.

The books bound by the methods described in these recent articles are invariably small and light and it is therefore this economic factor combined with that of artistic design, rather than strength which makes the variations in binding desirable.

The Quarter Binding

The diagram shows three-quarter-bound books. It is obvious that from a point of view of proportion the centre picture is by far the most attractive, irrespective of the materials or colours used. It is also obvious that the factor which regulates the pleasing proportions is the amount of cloth showing on each side of the spine.

These proportions are simply described in this formula which will enable the reader to cut both cloth and paper to the correct sizes.

Spine cloth.

Width = $\frac{2}{3}$ths cover width + spine width.

Length = Cover length + $1\frac{1}{2}$ins.

Paper.

Width = $\frac{4}{5}$ths cover width + $\frac{3}{4}$in.

Length = Cover length + $1\frac{1}{2}$ins.

When binding a book in this fashion, it is necessary to cover the spine in cloth first, and then to paste the paper over the rest of the board so it overlaps the edge of the cloth by about $\frac{1}{8}$in. The corners of the paper are, of course, trimmed acrosswise, just as if a full cloth binding were being dealt with, before folding in the overlapping edges on to the insides of the boards.

Finally, the endpapers are pasted down inside the boards in the manner already explained. The paper most suitable for this work is that which has approximately the same texture and strength as ordinary cartridge paper. Almost any pleasantly coloured pieces of paper may be used providing they are of the correct strength.

Colour Schemes

Before commencing the actual binding, it is as well to consider how best to match the colours available. Some colours are very reliable and will appear tasteful with any colour. Grey is one such colour, and the bookbinder will do well to always have available a stock of grey cloth which will match readily with almost any paper he cares to select.

A pleasing combination is that produced by the proportionate placing of red and black. A red spine with black paper on the rest of the boards gives an air of distinction to the book. Other colours which look well with red are blue and brown. Brown itself is also an accommodating colour and looks well with cream, yellow, gold or pale blue.

Colours to avoid matching are those which are known as opposites. Blue and yellow for instance, may catch the eye on an advertisement, but most certainly clash if placed next to each other. Red and green likewise, are suitable companions for traffic lights, but not for bookbinding.

Making Decorative Endpapers

When we consider that cartridge paper is suitable for the paper covering, it would seem a pity not to construct some of our own decorated papers from this source. Those readers who have practised lino cutting may like to make a simple motif on a block 1in. square. This repeated printed all over the cartridge paper will often produce a surprisingly effective patterned paper.

It is useful to mount the lino-cut on a small wooden block to facilitate printing. If the block is to be printed in black it is very effective if the cartridge paper is first given a water colour 'wash' and the black printed over the wash when it is dry.

The pleasing tone and black result will be particularly attractive when matched with a suitable cloth. When the printed paper is finished it should be allowed to dry. It is then made waterproof and smudge proof by polishing it with a good clear or light coloured floor polish. But it must be perfectly dry first.

All paper covers should be polished in this manner whether manufactured or home made. They will then last longer and be less inclined to pick up dust or fingermarks. It is of course, most necessary that they be polished before attempting to use them for covering.

Paste Graining

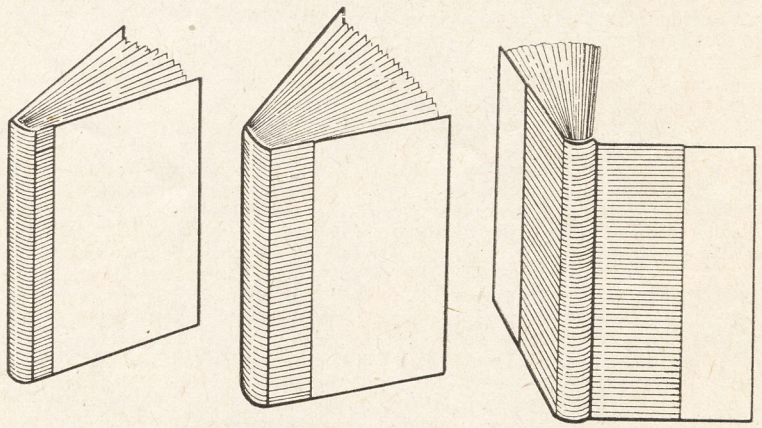
This is one of the simplest and yet most attractive kinds of cover paper, and no special kinds of skill or tools are required. A large pot of paste is mixed, and this is coloured by the addition of powder, water or poster colour. A fairly strong colour is required and this may be tested on a piece of scrap paper until the desired shade is reached.

The coloured paste is then pasted evenly all over a large sheet of cartridge paper. A cardboard 'comb' is cut about 2ins. long and this is drawn across the paste surface in the usual manner used for graining. By repetition the graining is made to cover the whole sheet. The comb may be drawn straight across the paper, diagonally, or in an S bend. The lines produced may be angular, curved, or 'squiggled', and cross-hatched at any angle.

If the first attempt is unsatisfactory it is merely necessary to re-paste the surface with the coloured paste and begin again. A little practice will show the beginner the limitless possibilities and patterns which may be produced by this means. When the desired result is achieved it is allowed to dry thoroughly and polished in the manner described.

Finally, it is important to remember whenever home-decorated cover papers are being made that the paper used must be big enough to provide for *both* sides of the book in question.

A final article will appear shortly on making and decorating suitable and simple paper jackets or dust covers for your completed books. (213)



Some examples of quarter-bound books as described

Have something 'different' in the home by making

A MODERN FIRE-SCREEN

HOWEVER stereotyped, or mass-produced, the rest of the furniture in the modern home, it is not unusual to find that the fire-screen, boasting the most prominent of positions, is the individual product of the family handyman.

The finished article may be further enhanced by the hand of an artist but our intention here is simply to show, in non-technical language, how the beginner, with even the minimum experience, can fashion a durable screen which can be left 'ungilded' and yet retain its attractiveness. The type in mind is made almost exclusively of 3-ply wood, only the feet (or shoes) requiring anything thicker than that.

Size and Shape

The size necessary to provide all the material would be 3ft. 6ins. by 1ft. 9 ins. Alternatively, there should be one piece measuring 2ft. 3ins. by 1ft. 9ins. for the screen itself, and a smaller piece measuring 1ft. 6ins. by 15ins. from which to cut the fittings.

As seen in Fig. 1, the screen is an oval shape taken from the rectangle. When this has been successfully accomplished by marking and cutting in the usual way the edges must be smoothed off with glasspaper and may be left with a bevel on each side. As far as carpentry is concerned, no further attention need be paid to the screen.

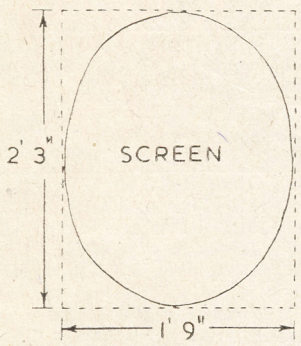


Fig. 1—The oval of the screen

The Stand Portion

The next stage is perhaps rather more exacting, but ought not to present a serious problem to the determined handyman. The fittings, as designed in Fig. 2, are cut from the board and it is essential to see that their position is satisfactorily established before gluing or tacking.

Remember that the centre piece forms the basis of the screen when assembled, and on it will depend whether your screen stands upright or not. A mistake in assembly will be difficult to remedy after fixing.

This centre piece is sandwiched between the outside pair, allowing an inch or more at the top, giving adequate 'bed-space' for the screen bottom. It should also protrude from between the other two pieces by ¼in. (or more) all along the bottom edge.

Assembly

After testing for an exact fit with the parts in place, mark the screen as a future guide and hammer home one or two nails to facilitate further handling. Attention should now be given to the outside edges. However careful the amateur woodworker may be, there may be a difference between the measurements intended and those achieved. Luckily a remedy can usually be found.

When your 'sandwich' is made up to take the screen in what will be an upright position, you may find that, as a result of 'fiddling', these outside edges do not now exactly correspond. The overlap of one piece or another will be too great to deal with by glasspapering.

You will need the aid of a rough file to pare down to uniformity. Afterwards a finer file will be necessary, and then a good smoothing down with glasspaper.

You are now ready to tackle a comparatively easier job. That of the feet, or shoes. These are of any soft wood, workshop scraps if necessary, measuring 9ins. by 2¼ins. each. The thickness is of less importance, as long as you can allow for the ¼in. grooves which are made at the half-way mark, into which is slotted the overlap from the centre piece of your base structure.

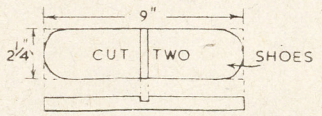


Fig. 3—Plan and side view of the flat shoe portions

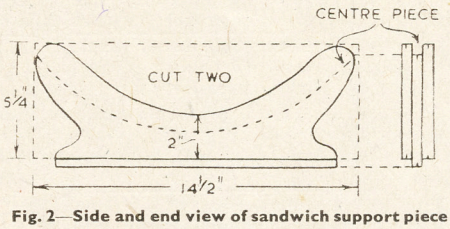
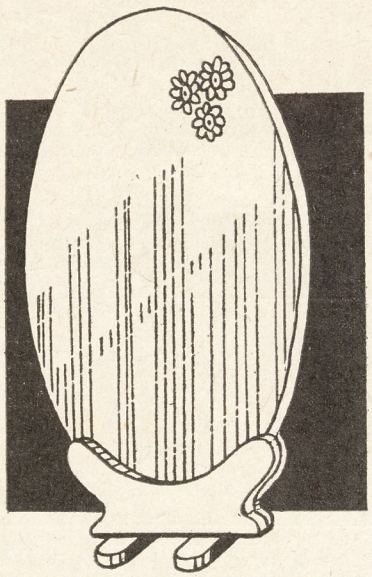


Fig. 2—Side and end view of sandwich support piece

Cut them out, round off the ends, and make a line across the middle of each. The widths of the grooves here will depend on the thickness of your plywood which differs in different manufactures. They should be deep enough however to let the shoes fit snugly home against the two outer pieces above them.

All your pieces are ready now for assembly. You have your screen, lower fittings, and two shoes. Having heated a pot of glue, apply the necessary quantity down inside the recess and slip the lower edge of the screen into position. There may be some difficulty about clamping but it is not entirely necessary. The screen will be found to be well gripped by the fittings and even the glue itself may seem superfluous. Leave it to set before fitting the shoes.



Finishing Decoration

When quite set, turn up and mark the position intended for the shoes (an equal distance from each end) then glue, and leave standing to set. The woodwork is now finished and you have the foundation on which to lavish whatever other touches you think fit: varnish, paint, transfers, or beading.

If you fancy making your own fretwork designs, you will find that, with the measurements mentioned here, there is material for a few small flower shapes or corner decoration left over from the plywood used.

A fire-screen, owing to its purely decorative purpose, is apt to outlast anything else in the room. Perhaps for this very reason one should aim at achieving a result as pleasing and satisfying as possible. (223)

Note

The large design supplement sheets are given free with alternate issues of 'Hobbies Weekly', but are not supplied with back numbers. They can, however, be obtained separately by quoting the reference number of the actual issue concerned. These back numbers of designs cost 6d. each (postage 1d.) apart from the actual issue of 'Hobbies.'

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